

WHAT IS CLAIMED IS:

1 1. A method for artifact detection and counting in a video signal processing circuit
2 having a count table, the method comprising using first and second loops for each of
3 horizontal and vertical count table entries, the first loop being adapted to increase the count
4 table entries up to the length of a remainder value of a detected artifact value and the second
5 loop being adapted to increase the count table entries using a quotient value of a detected
6 artifact value.

1 2. The method of claim 1, wherein using first and second loops in a horizontal direction
2 comprises:

3 defining a length of artifacts in the horizontal direction in a video image using the
4 equation $\text{contour_H} = (\text{contourH_Q} \times \text{PREVIOUS_GRID_SELECT} + \text{contour_H_R})$,
5 wherein contour_H is the length value of the artifacts, contourH_Q being a quotient value and
6 contour_H_R being a remainder value;

7 performing the first looping pass of a video data pixel block and increasing an entry in
8 the count table in response to quotient and remainder values of contour_H , the count table
9 entry being increased to a value not exceeding the remainder value; and

10 performing the second looping pass of the video data pixel block and increasing the
11 remainder values of artifact entries with a value equal to the quotient value - 1 and not
12 exceeding the end of a horizontal row.

1 3. The method of claim 2, wherein using first and second loops for horizontal count table
2 entries includes using an incremental value inc defined by the equation $\text{inc} =$
3 $\text{contour_H}/\text{PREVIOUS_GRID_SELECT}$.

1 4. The method of claim 1, wherein using first and second loops in a vertical direction
2 comprises:

3 defining a length of artifacts in the vertical direction in a video image using the
4 equation $\text{contour_V} = \text{contour_V_Q} * 8 + \text{contour_V_R}$, wherein contour_V is the length value
5 of the artifacts, contour_V_Q being a quotient value and contour_V_R being a remainder
6 value;

7 performing the first looping pass of a video data pixel block and increasing an entry in
8 the count table in response to quotient and remainder values of contour_H , the count table
9 entry being increased to a value not exceeding the remainder value; and

10 performing the second looping pass of the video data pixel block and increasing the
11 remainder values of artifact entries with a value equal to the quotient value - 1 and not
12 exceeding the end of a vertical column.

1 5. The method of claim 4, wherein using first and second loops for vertical count table
2 entries includes using an incremental value inc defined by the equation $\text{inc} = \text{contour_V}/8$.

1 6. The method of claim 1, wherein the vertical size of the count table entries is eight.

1 7. The method of claim 1, wherein the horizontal size of the count table entries is eight.

1 8. The method of claim 1, wherein the horizontal size of the count table entries is ten.

1 9. The method of claim 1, wherein the horizontal size of the count table entries is twelve.

1 10. The method of claim 1, further comprising defining a boundary for the size of at least
2 a portion of a loop.

1 11. The method of claim 10, wherein defining a boundary includes defining an upper
2 boundary.

1 12. The method of claim 10, wherein defining a boundary includes defining a lower
2 boundary.

1 13. The method of claim 10, wherein defining a boundary includes effecting a wrap
2 around within the count table.

1 14. The method of claim 1, wherein the count table entries is increased using only one
2 addition.